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IMPROVEMENTS TO JOINING ABUTTED PLANKS

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(57) Claim

1. An arrangement for joining two abutted planks including:
  - a first plank having an inside major face and outside major face, one of the ends of the plank being abutted to one of the ends of a second plank having an inside major face and an outside major face;
  - an aperture upon the inside major face of the first plank;
  - an aperture upon the inside major face of the second plank;
  - a channel upon each of the inside major faces of the first and second planks, the channel of each inside major face being such that they are aligned to provide a substantially single channel extending between the apertures upon both of the inside major face's of the first and second planks;
  - an elongate securing means located in the substantially single channel;
  - a first engagement means located in the aperture in the inside major face of the first plank;
  - a second engagement means located in the aperture upon the inside major face of the second plank, the second engagement means having a mechanical relationship with the first engagement means and the elongate securing means to draw together the first and second engagement means and hence securing together the two abutted planks.

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**COMPLETE SPECIFICATION**  
**FOR A STANDARD PATENT**  
**ORIGINAL**

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**Invention Title:**

IMPROVEMENTS TO JOINING ABUTTED PLANKS

**Details of Associated Provisional Application:**

AUSTRALIAN Patent Application No. PL1500 Dated 25th March 1992

The following statement is a full description of this invention,  
including the best method of performing it known to us:

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- second engagement means and elongate securing means is provided by a the elongate securing means having a threaded portion at one end and at least one of the first or second engagement means having a nut means adapted to be threaded upon the elongate securing means to provide the
- 5     securing together of the two abutted planks.

In preference, both planks have an outside major face in which the aperture upon the inside major face of the first plank and the aperture upon the inside major face of the second plank are holes providing a passage from the inside major face to the outside major face of both planks.

- 10    Accordingly, to another form of this invention there is provided an arrangement for joining two abutted planks each plank including at least one aperture and at least one channel communicating with the aperture and the end of the plank abutted with the end of the other plank, the arrangement including for each plank at least one engagement means being adapted to
- 15    engage at least one side of a said aperture within the plank, and securing means adapted reside within the channels and adapted draw together the respective engagement means so that the ends of the planks are securely abutted together.

- 20    In preference, the apertures are either blind holes in the respective planks or extend through the respective planks thereby providing a passage therethrough.

In preference, the channels are either blind passages or they extend through the respective planks to provide a passage through the faces of the respective planks.

- 25    Preferably, the channels extend from the abutting ends substantially at right angles.

In preference, both planks are manufactured from particle board.

- 30    In preference, the location of the apertures and the channels within the planks is selected so that the planks align with abutted ends so as to form in effect a larger composite plank.

Preferably, one of the engagement means is part of the securing means.

The invention will now be described with reference to the accompanying drawings as exhibited by a preferred embodiment.

FIG. 1 is a sketch of an end of a stringer or plank,

FIG. 2 is a sketch of two stringers or planks butt joined together,

5 FIG. 3 is a sketch of showing the gusset covering the joint illustrated in FIG. 2,

FIG. 4 is a more detailed sketch of the securing and engagement means, and

FIG. 5 is a further embodiment of the securing and engagement means.

10 The purpose of the following description is to illustrate the invention rather than limit the scope of the invention to any detail of the preferred embodiment.

The material from which the stringers and gussets described below are preferably 32 mm thick particle board of the type known as custom wood. However, other timbers can be used such as pine or red cedar (as long as  
15 there is no substantial weakening by the combination of aperture and channel along the timber's grain)

Referring to FIG. 1 a plank or stringer 1 is illustrated which has an inside major side 2 and an outside major side 3.

20 Within the stringer 1 is cut a blind channel 6 (a channel with a floor) from the butting end 4 of the plank or stringer 1 which extends into the plank or stringer 1 to form a communicating channel with an aperture 5 which is also cut into the plank or stringer 1. The blind channel 6 provides a means of preventing the engagement means from sliding out through the outside major face 3, further its effect upon the strength of the plank is not as great as a channel  
25 extending through to both major faces.. The aperture 5 in this embodiment extends through the plank 1 to provide a passage through the faces of the respective planks, however the aperture 5 may also be blind (having a floor thus not extending through).

